

IN THE CLAIMS

Claims 2 -6, 8 - 12, and 14 - 18 have been cancelled. Claims 19 - 29 have been added.

1. (original) A method of transmitting data frames to a plurality of output ports, each of the data frames having a destination associated with one of the output ports, the method comprising:

at each of a plurality of input ports, partitioning a portion of each data frame to provide one or more ordered data cells having data representative of a sequence number corresponding with the output port associated with the destination of the data frame, the data representative of the sequence number in each data cell indicating an ordinal position of the data cell among the ordered data cells of the data frame; and

at each of the output ports, receiving a forwarded data cell for each ordered data cell associated with each data frame having a destination associated with the output port, each forwarded data cell corresponding with an ordered data cell and data frame associated with the ordered data cell, and determining an ordinal position of the forwarded data cell among the forwarded data cells associated with the data frame based upon data in the forwarded data cell representative of the sequence number.

Claims 2 - 6 (canceled).

7. (original) A data switch comprising:
a plurality of output ports for transmitting forwarded data frames to destinations;
a plurality of input ports for receiving data frames, each received data frame having a destination associated with one of the output ports, each of the plurality of input ports including logic for partitioning a portion of each received data frame to

provide one or more ordered data cells having data representative of a sequence number corresponding with the output port associated with the destination of the received data frame, the data representative of the sequence number in each ordered data cell indicating an ordinal position of the ordered data cell among the ordered data cells of the data frame,

wherein each of the output ports receives forwarded data cells, each forwarded data cell corresponding with an ordered data cell generated at one of the input ports and having data indicative of the sequence number of the corresponding ordered data cell, and includes logic for determining an ordinal position of the forwarded data cell among the forwarded data cells of a forwarded data frame based upon the data indicative of the sequence number in the forwarded data cell.

Claims 8 - 12 (canceled).

13. (original) In a data communication network including a plurality of host computers for transmitting data packets to a plurality of network devices, each of the data packets having data representative of a destination network address, each of the network devices having a media access control (MAC) address associated therewith, the improvement including:

a plurality of output ports, each of the output ports being coupled to at least an associated one of the network devices for transmitting MAC data frames to the at least one network device according the MAC address associated therewith;

a look-up engine for receiving the data packets from the host computers addressed to one or more of the network devices and forming intermediate data frames based upon the data packets, the intermediate data frames having a data payload and

information identifying an output port associated with the one or more network devices;

a plurality of input ports for receiving intermediate data frames from the look up engine, each received data frame having a destination associated with one of the output ports, each of the plurality of input ports including logic for partitioning the data payload of each received intermediate data frame to provide one or more ordered data cells having data representative of a sequence number corresponding with the output port associated with the destination of the received intermediate data frame, the data representative of the sequence number in each ordered data cell indicating an ordinal position of the ordered data cell among the ordered data cells of the intermediate data frame,

wherein each of the output ports receives forwarded data cells, each forwarded data cell corresponding with an ordered data cell originating at one of the input ports and having data indicative of the sequence number of the corresponding ordered data cell, and includes logic for determining an ordinal position of the forwarded data cell among the forwarded data cells of a forwarded data frame based upon the data indicative of the sequence number in the forwarded data cell.

Claims 14 - 18 (canceled).

19. (new) The method of claim 1, wherein each of the output ports includes logic indicating the availability of buffer space for the receipt of additional cells from a crossbar.

20. (new) The method of claim 19, further including each of the output ports signaling to each of a plurality of crossbar sections each of the output ports ability to accept additional data cells in a following cell interval.

21. (new) The method of claim 20, wherein the signaling to each of the plurality of crossbar sections occurs via a data bus between each of the output ports and each of the plurality of the crossbar sections.

22. (new) The data switch of claim 7, wherein each of the output ports includes logic to indicate the availability of buffer space for the receipt of additional cells from a crossbar.

23 (new) The data switch of claim 22, wherein the logic to indicate the availability of buffer space signals to each of a plurality of crossbar sections each of the output ports ability to accept additional data cells in a following cell interval.

24. (new) The data switch of claim 23, further including a data bus between each of the plurality of the output ports and each of the crossbar sections that transfers the signal to indicate the availability of buffer space.

25. (new) The improvement of claim 13, wherein each of the output ports includes logic to indicate the availability of buffer space for the receipt of additional cells from a crossbar.

26. (new) The improvement of claim 25, wherein the logic to indicate the availability of buffer space signals to each of the plurality of crossbar sections each of the output ports ability to accept additional data cells in a following cell interval.

27. (new) The improvement of claim 26, further including a data bus between each of the plurality of the output ports and each of the crossbar sections that transmits the signal to indicate the availability of buffer space.

28. (new) The data switch of claim 7, wherein application specific integrated circuit (ASIC) reassembly buffers receive the forwarded data cells at each of the output ports.

29. (new) The improvement of claim 13, wherein application specific integrated circuit (ASIC) reassembly buffers receive the forwarded data cells at each of the output ports.